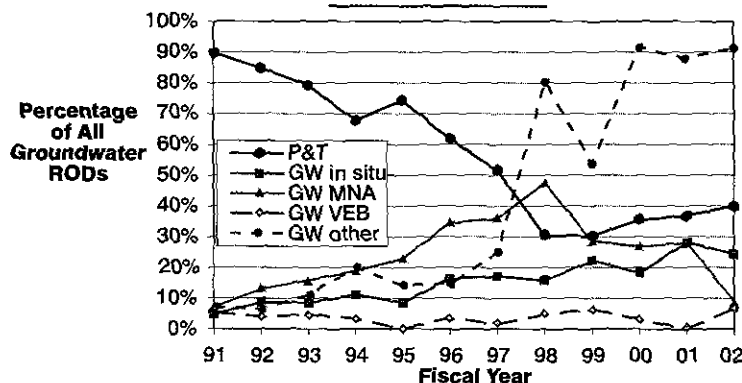


- RODs selecting pump and treat have decreased from near 90% in the early 1990's to about 40% in FY 2002, while RODs selecting in situ groundwater treatment have been generally increasing to 24% in FY 2002.

**Superfund Remedial Actions:  
Groundwater RODs  
Selecting Groundwater Remedies  
(FY 1991 - 2002)**

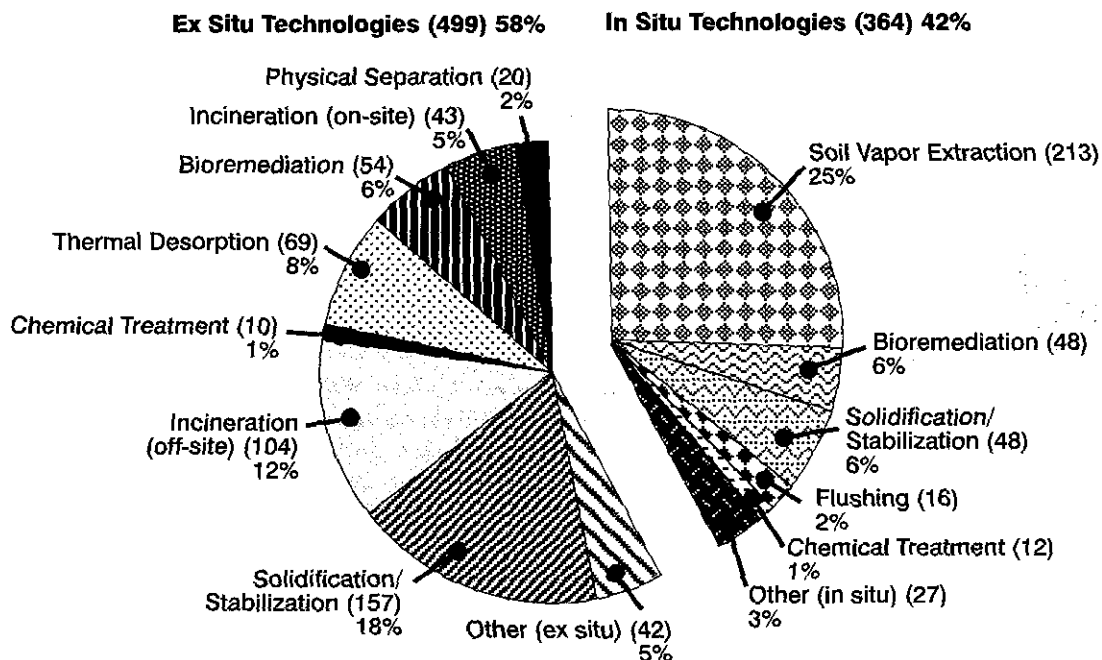


For additional information about this report, please contact Carlos Pachon with EPA's Office of Superfund Remediation and Technology Innovation at (703) 603-9904 or at [pachon.carlos@epa.gov](mailto:pachon.carlos@epa.gov).

**OBTAINING COPIES OF TREATMENT TECHNOLOGIES  
FOR SITE CLEANUP: ANNUAL STATUS REPORT  
(ASR), EPA 542-R-03-009**

- Download a PDF:  
<http://clu-in.org/asr/>
- Access the ASR database on line:  
<http://cfpub.epa.gov/asr/>
- Order hard copies on line:  
<http://www.epa.gov/ncepihom/>
- Order hard copies by phone:  
1-800-490-9198
- Order hard copies by fax:  
(513) 489-8695
- Order hard copies by mail:  
National Service Center for  
Environmental Publications  
P.O. Box 42419  
Cincinnati, OH 45242-2419

**Superfund Remedial Actions: Source Control Treatment Projects  
(FY 1982-2002)**





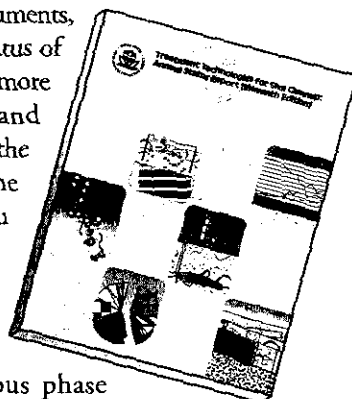
# Treatment Technologies for Site Cleanup: Annual Status Report (Eleventh Edition) Fact Sheet

The U.S. Environmental Protection Agency's (EPA) Office of Superfund Remediation and Technology Innovation (OSRTI) encourages the use of innovative, cost-effective technologies for the characterization and treatment of contaminated waste sites, soils, and groundwater. To achieve that goal, OSRTI works with many partners inside EPA, in other federal agencies, and in the private sector to identify better, faster, and cheaper options for cleanup.

OSRTI is pleased to announce the availability of the eleventh edition of the *Treatment Technologies for Site Cleanup: Annual Status Report (ASR)*, EPA 542-R-03-009, which documents the use of treatment technologies at hazardous waste sites. The report presents a list and analysis of remedial actions at Superfund sites where treatment technologies are being used. Site managers can use this report to evaluate cleanup alternatives for similar sites, while technology vendors can use it to identify potential markets for their products. EPA also uses the information to track progress in the application of established and innovative treatment technologies.

## Treatment Technologies for Site Cleanup: Annual Status Report (Eleventh Edition)

The Eleventh Edition documents, as of March 2003, the status of technology applications at more than 1,800 soil and groundwater projects in the Superfund program. The report examines both in situ and ex situ source control technologies (addressing soil, sludge, sediment, other solid-matrix wastes, and non-aqueous phase liquids [NAPL]), as well as in situ groundwater treatment technologies and pump and treat (P&T) for groundwater. The principal technologies for the treatment of soil and other solid wastes that are discussed in the report are soil vapor extraction (SVE), solidification/stabilization, on- and off-site incineration, bioremediation, and thermal desorption. The in situ groundwater treatment technologies included in this report are air sparging, bioremediation, chemical treatment, permeable reactive barriers, multi-phase extraction, phytoremediation, in-well air stripping, in situ thermal treatment, and flushing. Groundwater containment using vertical engineered barriers is also included in this report.



### New in the 11th Edition

- 165 source control and in situ groundwater projects from FY 2000 to 2002.
- Updates on 142 source control and in situ groundwater projects.
- 743 groundwater pump and treat (P&T) projects, including 407 new P&T projects, most of which were added to the database in FY 2000 to 2002.
- Information on 142 new P&T projects, including 407 new P&T projects, most of which were added to the database in FY 2000 to 2002.
- Details on 142 new P&T projects, including 407 new P&T projects, most of which were added to the database in FY 2000 to 2002.

Some findings of this report include:

- At almost two-thirds (62%) of Superfund sites, source control or groundwater treatment has been implemented or is currently planned.
- The complexity of RODs has been increasing. The proportion of RODs addressing both soil and groundwater contamination has increased from 20% in FY 1997 to 56% in FY 2002.
- Of the 2,610 RODs and ROD amendments signed, some 1,505 (58%) included treatment remedies.
- In situ technologies make up 42% of all source control treatments.
- Groundwater treatment was selected at 71% of Superfund sites that selected a groundwater remedy.
- 31% of source control and groundwater treatment projects have been completed, and an additional 39% are operational.

### Superfund Remedial Actions: Status of Groundwater Pump and Treat Projects (FY 1982 - 2002)

Total Number of Projects = 743

